

☐ NSSL Meso Id

The **NSSL Meso ID** overlay provides a numeric identification number for each identified circulation. Use this information in conjunction with the **NSSL Meso algorithm output table**, which is accessed through the **Control Panel**. Examples of NSSL Meso ID's are shown in Figure 3.7. NSSL Meso ID's are displayed as purple numbers on light grey squares.

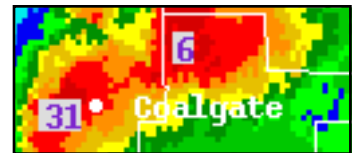


Figure 3.7: Meso ID Icons

☐ NSSL 2D Meso

The **NSSL 2D Meso** overlay displays 2D (two-dimensional) circulation features on a tilt-by-tilt basis. These are the “building blocks” for the 3D circulation detections. Weak 2D features are displayed as a thin cyan circle, with thick cyan circles being stronger detections. 2D feature IDs are similar to Meso IDs (blue on grey box). However, the 2D Meso IDs will **NOT** match the Meso IDs. Also, a 2D feature with an ID equal to zero is a feature which remained unassociated to a 3D circulation detection. See Figure 3.8. Note that the 2D mesocyclone product is designed to be used primarily on the velocity image.

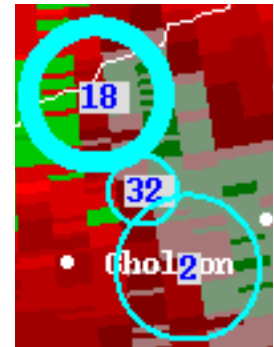


Figure 3.8:
2D Meso Icons

☐ NSSL Torn Tracks

The **NSSL Tornado Tracks** overlay denotes the past and projected future paths of a tornado detection. New tornado detections show a single five-minute forecast position. (Figure 3.9). See **note above about tracks**.

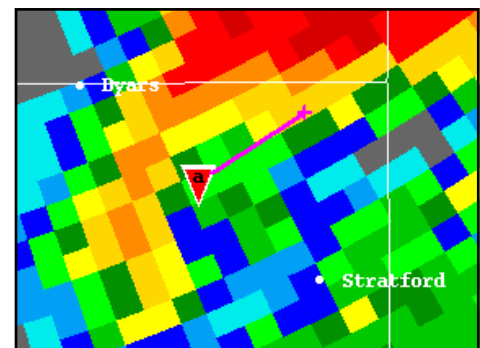


Figure 3.9: NSSL Tornado Detection Algorithm icon with future projected tornado track.

☐ NSSL Torn

The **NSSL Tornado** button toggles the NSSL Tornado overlay on or off. The tornado icon is a picture representation of any TVS detected by the **NSSL TDA**. TVS detections are designated sequentially by small letters from “a” through “z”. This means that the first tornado detected during a storm is denoted by “a” (Figure 3.10). The next TVS, whenever (or if) it occurs, will be “b,” etc. Use this information for each TVS in conjunction with the **NSSL tornado output table**.

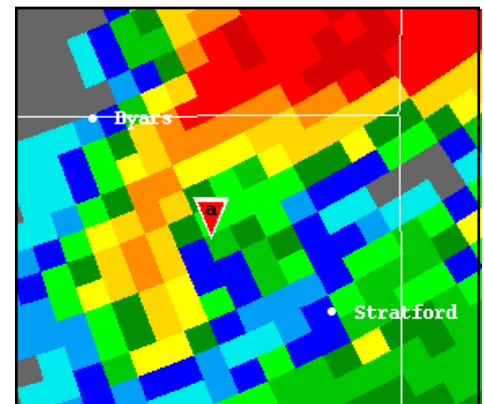


Figure 3.10: NSSL Tornado Detection Algorithm icon shown on a reflectivity image.

☐ Downburst

The Downburst overlay denotes the predictions and detections of moderate and severe downbursts from the NSSL Damaging Downburst Prediction and Detection Algorithm (DDPDA). Cyan “hollow” ellipses indicate predictions and cyan “filled” ellipses indicate detections. Ellipses with an “M” indicate moderate winds (30-50 kts) and those with an “S” indicate severe winds (> 50 kts).

☐ Lightning

The Lightning button toggles the lightning overlay on or off. The lightning data (ground strike detections) are displayed in yellow as +’s (positive polarity) and -’s (negative polarity). **Note: When the Auto-update feature is turned on the lightning data will automatically update every one minute rather than with every volume scan.**

☐ Surface Obs

The Surface Obs button toggles on and off the surface data ingested by the WDSS. The data are plotted as an overlay using the standard surface observation station model.

☐ BWER

The BWER overlay denotes the output from the NSSL Bounded Weak Echo Region (BWER) Algorithm. Green, yellow and Red “BWER” overlays indicate various confidence levels from the algorithm:

Green:	50-60% confidence
Yellow:	60-80% confidence
Red:	greater than 80% confidence

TIPS FOR LAYERING OVERLAY PRODUCTS

All overlays may be activated at one time. They are displayed in “layers,” with each type of overlay existing on its own imaginary transparent layer. The overlays are automatically layered on-screen when more than one is activated, with the most recently activated overlay on top. There is no direct way to manually change the order of overlays in RADS. However, to bring an overlay to the top when more than one overlay is activated, deactivate, then immediately reactivate, the associated overlay toggle button. This will bring that overlay to the top. Note that the order of the overlay layers will change again, as soon as another is activated or deactivated.

Maps POP-UP MENU

Polar grids, city and county lines, highways and rivers are accessed through the **Maps** button on the image tool bar. The **Maps** pop-up menu is shown in Figure 3.11. The user may select an appropriate polar grid (range rings), highway maps, river, and/or city and county maps. Each of these overlays is a toggle button (on/off). If cities do not exist for your radar, see [Appendix F](#) for information on [creating custom city locations and name markers](#). See [Appendix C](#) for information on [customizing polar grids](#), their spacing, and their central point.



Figure 3.11

Zoom MODE

The **Zoom** button on the image toolbar puts the image window into “zoom mouse mode.” To activate the **Zoom** mode click it once with the <left-mouse> button. Refer to the [Help Bar](#) and make a note of the various functions performed by the mouse. When zooming, unzooming, and re-centering, the image is centered on the position on the image where the mouse button is clicked. The current zoom factor is always shown at the bottom of the image window in the information area. Note the following functions, with their help bar appearances shown:

- | | |
|------------------|---|
| ZM | "zoom" <left-mouse> - To "zoom" means to double the magnification factor. For example, to zoom an image that is being viewed at 2 times the normal size (2X) would result in a "4X" zoomed image. |
| DBL ZM | "double zoom"<shift> + <left-mouse> - To "double zoom" means to quadruple the magnification factor of an image. For example, to double zoom an image that is being viewed at 2 times the normal size (2X) would result in a "8X" zoomed image. Image zooms are always expressed in powers of two (or, $2^3 = 8X$ zoom). |
| RE-CNTR | "re-center"<middle-mouse> - Re-centers the image at a specified point. |
| 8X | "8X Zoom"<shift> + <middle-mouse> - Zooms to a 2^3 zoom, regardless of the current zoom of the image. |
| FULL UNZM | "full unzoom"<shift> + <right-mouse> - Fully unzooms an image to 1X zoom. |
| UNZM | "unzoom"<right-mouse> - Unzooms the image a minus 2X magnification factor from the present view. |

To exit the **Zoom** mode, click on another mode (**Trends**, **X-Sect** or **Raw Data**).